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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,003	11/13/2001	Satoshi Seo	740756-2389	6380
31780	7590	03/25/2005	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			NEGRON, ISMAEL	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

09/987,003

Applicant(s)

SEO, SATOSHI

Examiner

Ismael Negron

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,15-25,28-38,41-49,51-59,61-83 and 85-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,15-25,28-38,41-49,51-59,61-83 and 85-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/18/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 18, 2005 has been entered.

Response to Amendment

2. Applicant's amendment filed on February 18, 2005 has been entered. Claims 1, 4-12, 15-23, 28-36, 41-49, 51-59, 61-68, 81 and 85-92 have been amended. Claims 2, 3, 13, 14, 26, 27, 39, 40, 50, 60 and 84 have been cancelled. No claim has been added. Claims 1, 4-12, 15-25, 28-38, 41-49, 51-59, 61-83 and 85-92 are still pending in this application, with claims 1, 12, 23, 36, 49, 59 and 81 being independent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-4, 12-15, 23-28, 36-41, 49-51, 59-61 and 69-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over KAWAMI et al. (U.S. Pat. 5,882,761).

KAWAMI et al. discloses an illumination device having:

- **a container (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 10;**
- **the container being sealed off from the atmosphere (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), column 4, line 30;**
- **a first substrate (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 2;**
- **an organic electro luminescent element (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 6;**
- **the organic electro luminescent element (OELE) being positioned over the first substrate (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), as seen in Figure 1;**
- **a second substrate (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 7;**
- **the second substrate being opposed to the first substrate (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), as seen in Figure 1;**
- **the second substrate having a concave portion (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 11;**

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- **a drying agent (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), Figure 1, reference number 8;**
- **the drying agent being filled in the concave portion (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81), as seen in Figure 1;**
- **the drying agent chemically absorbing moisture and maintaining its solid state after the moisture absorption (as recited in claims 12 and 59), column 4, lines 35-37;**
- **the drying agent including one of an alkaline metal oxide and an alkaline-earth metal oxide, column 4, lines 43-47;**
- **the drying compound including sodium oxide (Na₂O) (as recited in claims 24, 37 and 82), column 4, lines 48 and 49;**
- **the drying compound including calcium oxide (CaO) (as recited in claims 25, 38 and 83), column 4, line 51;**
- **a sealing member (as recited in Claim 49), Figure 1, reference number 9**
- **the sealing member being interposed between the first and second substrate (as recited in Claim 49), as seen in Figure 1;**
and
- **the illumination device being incorporated into an OELE display device (as recited in claims 4, 15, 28, 41, 51, 61, 69-74 and 85), column 1, lines 6-9.**

KAWAMI et al. discloses all the limitations of the claims, except:

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- the drying agent having a porosity of 20% or more (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81);
- the illumination device being used in a video camera (as recited in claims 5, 16, 29, 42, 52, 62, 86);
- the illumination device being used in a digital camera (as recited in claims 6, 17, 30, 43, 53, 63 and 87);
- the illumination device being used in an image reproduction apparatus (as recited in claims 7, 18, 31, 44, 54, 64 and 88);
- the illumination device being used in a portable computer (as recited in claims 8, 19, 32, 45, 55, 65 and 89);
- the illumination device being used in a mobile telephone (as recited in claims 9, 20, 33, 46, 56, 66 and 90);
- the illumination device being used in a personal computer (as recited in claims 10, 21, 34, 47, 57, 67 and 91); and
- the illumination device being used in an acoustic equipment (as recited in claims 11, 22, 35, 48, 58, 68 and 92);

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to form the drying agent having a porosity of 20% or more (as recited in claims 1, 12, 23, 23, 36, 49, 59 and 81) since the Examiner takes Official Notice that high porosity drying agent bodies are old and well known in the art. One of ordinary skill in the art would have been motivated to form a drying agent into a body

with a high porosity to enhance the effectiveness of the drying agent by increasing its surface area and allowing more of the agent to contact/react with moisture.

In addition, regarding the illumination device being incorporated in one of a video camera, a digital camera, an image reproduction apparatus, a portable computer, a mobile telephone, a personal computer and an acoustic equipment (as recited in claims 4-11, 15-22, 28-35, 41-48, 51-58, 61-68 and 85-92), the examiner takes Official Notice that the use of OELE devices is old and well known in the illumination art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the OELE of KAWAMI et al. and SOUTHWICK, Jr. in one of the cited apparatus. One would have been motivated since OELE are recognized in the illumination art to have many desirable advantages, including reduced size and thickness, high efficiency, low power consumption, long life, resistance to vibrations, and low heat production, over other light sources. See Section 5 of the instant Office Action.

Relevant Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ebisawa et al. (U.S. Pat. 6,284,342), **Ishii et al.** (U.S. Pat. 6,551,724), **Otsuki et al.** (U.S. Pat. 6,737,176) and **Mashiko et al.** (U.S. Pat. 6,836,071) disclose organic electroluminescent element (OELE) devices having the OELE positioned on a first substrate, and drying agents located inside the concavity of a second substrate. A

sealing member is positioned between the first and second substrates to seal the device OELE from the atmosphere.

Response to Arguments

5. Applicant's arguments filed October 5, 2004 have been fully considered but they are not persuasive.

6. Regarding the Examiner's rejection of claims 1, 12, 23, 36, 49, 59 and 81 under 35 U.S.C. 103(a) as being unpatentable over KAWAMI et al. (U.S. Pat. 5,882,761), the applicant argues that the cited reference fails to disclose all the features of the claimed invention, specifically a second substrate having a concave portion with the drying agent filled in the concave portion, or the drying agent having a porosity of 20% or more.

7. In response to applicant's arguments that the reference fails to disclose a second substrate having a concave portion with the drying agent filled in the concave portion, the applicant is directed to Figure 1 of KAWAMI et al.

As detailed in Section 3 of the instant Office Action, KAWAMI et al. discloses a first substrate 10 having formed thereon an organic electroluminescent element 6, and a second substrate 7 having a drying agent 8 disposed in a concave portion 11.

8. Regarding the drying agent having a porosity of 20% or more, one of ordinary skill in the art, as stated in Section 3 of the instant Office Action, would have being

driven to form the drying agent of KAWAMI et al. into a body having a high porosity (e.g. 20% or more) to increase the surface area of the drying agent and improve its drying effect. It is an old and well-known fact that generally increasing the surface area of chemical reactants increases the rate and efficiency of the reaction such reactants are intended to achieve, while reducing compartmentalization of the reactants.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negrón whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (703) 872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you

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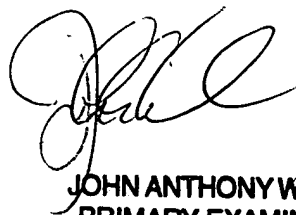
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have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.


Inf

March 11, 2005


JOHN ANTHONY WARD
PRIMARY EXAMINER